



## show diameter

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## show diameter aaa-statistics

*Table 1: show diameter aaa-statistics Command Output Descriptions*

| Field                                 | Description                                      |
|---------------------------------------|--|
| <b>Authentication Servers Summary</b> |  |
| <b>Message Stats</b>                  | Total Diameter session message statistics.       |
| Total MA Requests                     | Total number of Multimedia-Auth-Requests.        |
| Total MA Answers                      | Total number of Multimedia-Auth-Answers.         |
| MAR - Retries                         | Total number of Multimedia-Auth-Request retries. |
| MAA Timeouts                          | Total number of Multimedia-Auth-Answer timeouts. |
| MAA - Dropped                         | Total number of Multimedia-Auth-Answer dropped.  |
| Total SA Requests                     | Total number of Server-Assignment-Requests.      |

| Field             | Description   |
|-------------------|---|
| Total SA Answers  | Total number of Server-Assignment-Answers.                  |
| SAR - Retries     | Total number of Server-Assignment-Request retries.          |
| SAA Timeouts      | Total number of Server-Assignment-Answer timeouts.          |
| SAA - Dropped     | Total number of Server-Assignment-Answers dropped.          |
| Total UA Requests | Total number of User-Authorization-Requests.                |
| Total UA Answers  | Total number of User-Authorization-Answers.                 |
| UAR - Retries     | Total number of User-Authorization-Request retries.         |
| UAA Timeouts      | Total number of User-Authorization-Answer timeouts.         |
| UAA - Dropped     | Total number of User-Authorization-Answers dropped.         |
| Total LI Requests | Total number of Location-Info-Requests.                     |
| Total LI Answers  | Total number of Location-Info-Answers.                      |
| LIR - Retries     | Total number of Location-Info-Request retries.              |
| LIA Timeouts      | Total number of Location-Info-Answer timeouts.              |
| LIA - Dropped     | Total number of Location-Info-Answers dropped.              |
| Total RT Requests | Total number of Registration-Termination-Requests.          |
| Total RT Answers  | Total number of Registration-Termination-Answers.           |
| RTR - Rejected    | Total number of Registration-Termination-Requests rejected. |
| Total PP Requests | Total number of Push-Profile-Requests.                      |
| Total PP Answers  | Total number of Push-Profile-Answers.                       |
| PPR - Rejected    | Total number of Push-Profile-Requests rejected.             |
| Total DE Requests | Total number of Diameter-EAP-Requests.                      |
| Total DE Answers  | Total number of Diameter-EAP-Answers.                       |
| DEA - Accept      | Total number of Diameter-EAP-Answers accepted.              |
| DEA - Reject      | Total number of Diameter-EAP-Answers rejected.              |
| DER - Retries     | Total number of Diameter-EAP-Request retries.               |
| DEA Timeouts      | Total number of Diameter-EAP-Answer timeouts.               |
| DEA - Dropped     | Total number of Diameter-EAP-Answer dropped.                |

| Field                         | Description   |
|-------------------------------|---|
| Total AA Requests             | Indicates the total number of AA (Authentication and/or Authorization) Request messages sent by P-GW on S6b interface to AAA Server/Proxy.      |
| Total AA Answers              | Indicates the total number of AA (Authentication and/or Authorization) Answer messages received by P-GW on S6b interface from AAA Server/Proxy. |
| AAR - Retries                 | Indicates the total number of AAR (AA Request) messages retransmitted by P-GW on S6b interface to AAA Server/Proxy.                             |
| AAA Timeouts                  | Indicates the total number of AAA (AA Answer) messages timed-out due to no response from AAA Server/Proxy.                                      |
| AAA - Dropped                 | Indicates the total number of AAA (AA Answer) messages dropped due any reason from AAA Server/Proxy.  |
| ASR                           | Total number of Abort-Session-Requests.   |
| ASA                           | Total number of Abort-Session-Answers.  |
| RAR                           | Total number of Re-Auth-Requests.   |
| RAA                           | Total number of Re-Auth-Answers.  |
| STR                           | Total number of Session-Termination-Requests.   |
| STA                           | Total number of Session-Termination-Answers.  |
| STR - Retries                 | Total number of Session-Termination-Request retries.  |
| AAA-Failure-Indication        | Total number of times the AAA-Failure-Indication AVP is sent over Diameter Authentication interfaces (S6b/SWm/STa).                             |
| <b>DE Message Error Stats</b> |   |
| Diameter Protocol Errs        | Total number of Diameter protocol errors.   |
| Bad Answers                   | Total number of bad answers.  |
| Unknown Session Reqs          | Total number of unknown session requests.   |
| Unknown Command Code          | Total number of unknown command codes.  |
| Request Timeouts              | Total number of request timeouts.   |
| Parse Errors                  | Total number of parse errors.   |
| Request Retries               | Total number of request retries.  |
| <b>Session Stats</b>          | Diameter Session Statistics.  |
| Total Sessions                | Total number of sessions.   |
| Freed Sessions                | Total number of freed sessions.   |

| Field                              | Description  |
|------------------------------------|--|
| Session Timeouts                   | Total number of session timeouts.  |
| Active Auth Sessions               | Total number of active authentication sessions.  |
| Active Acct Sessions               | Total number of active accounting sessions.  |
| <b>FH Behavior (emps)</b>          |  |
| <b>Continue</b>                    | Indicated the number of times the failure handling action "Continue" was triggered.                              |
| With Retry                         | Indicates the number of times failure handling action "continue with Retry" is taken using the eMPS template.    |
| Without Retry                      | Indicates the number of times failure handling action "continue without Retry" is taken using the eMPS template. |
| <b>Retry and Terminate</b>         | Indicates the number of times failure handling "Retry and Terminate" was triggered.                              |
| Retry and Terminate                | Indicates the number of times failure handling "retry and terminate" is taken using eMPS template.               |
| Retry Term without STR             | Indicates the number of times failure handling "retry and terminate without STR" is taken using eMPS template.   |
| <b>Termination</b>                 | Indicates the number of times failure handling "Termination" was triggered.                                      |
| Terminate                          | Indicates the number of times failure handling "terminate" is taken using eMPS template.                         |
| Terminate without STR              | Indicates the number of times failure handling "terminate without STR" is taken using eMPS template.             |
| <b>STR Termination Cause Stats</b> | Session-Termination-Request termination cause statistics.  |
| Diameter Logout                    | Total number of Session-Termination-Request terminations due to Diameter logouts.                                |
| Service Not Provided               | Total number of Session-Termination-Request terminations due to service not provided.                            |
| Bad Answer                         | Total number of Session-Termination-Request terminations due to bad answers.                                     |
| Administrative                     | Total number of Session-Termination-Request terminations due to administrative reasons.                          |
| Link Broken                        | Total number of Session-Termination-Request terminations due to links broken.                                    |
| Auth Expired                       | Total number of Session-Termination-Request terminations due to auth expiry.                                     |
| User Moved                         | Total number of Session-Termination-Request terminations due to user moves.                                      |

| <b>Field</b>             | <b>Description</b>  |
|--------------------------|---|
| Session Timeout          | Total number of Session-Termination-Request terminations due to session timeouts.     |
| User Request             | Total number of Session-Termination-Request terminations due to user requests.        |
| Lost Carrier             | Total number of Session-Termination-Request terminations due to lost carriers.        |
| Lost Service             | Total number of Session-Termination-Request terminations due to lost service.         |
| Idle Timeout             | Total number of Session-Termination-Request terminations due to idle timeouts.        |
| NAS Session Timeout      | Total number of Session-Termination-Request terminations due to NAS session timeouts. |
| Admin Reset              | Total number of Session-Termination-Request terminations due to admin resetting.      |
| Admin Reboot             | Total number of Session-Termination-Request terminations due to admin reboots.        |
| Port Error               | Total number of Session-Termination-Request terminations due to port errors.          |
| NAS Error                | Total number of Session-Termination-Request terminations due to NAS errors.           |
| NAS Request              | Total number of Session-Termination-Request terminations due to NAS requests.         |
| NAS Reboot               | Total number of Session-Termination-Request terminations due to NAS reboots.          |
| Port Unneeded            | Total number of Session-Termination-Request terminations due to unneeded ports.       |
| Port Preempted           | Total number of Session-Termination-Request terminations due to preempted ports.      |
| Port Suspended           | Total number of Session-Termination-Request terminations due to suspended ports.      |
| Service Unavailable      | Total number of Session-Termination-Request terminations due to unavailable service.  |
| Callback                 | Total number of Session-Termination-Request terminations due to callback.             |
| User Error               | Total number of Session-Termination-Request terminations due to user errors.          |
| Host Request             | Total number of Session-Termination-Request terminations due to host requests.        |
| <b>Result Code Stats</b> |   |

| Field                            | Description  |
|----------------------------------|--|
| Result Code 1xxx                 | Total number of S6b messages processed and responded with the result code 1xxx.  |
| Result Code 2xxx                 | Total number of S6b messages processed and responded with the result code 2xxx.  |
| Result Code 3xxx                 | Total number of S6b messages processed and responded with the result code 3xxx.  |
| Result Code 4xxx                 | Total number of S6b messages processed and responded with the result code 4xxx.  |
| Result Code 5xxx                 | Total number of S6b messages processed and responded with the result code 5xxx.  |
| Other Result Code                | Total number of S6b messages processed and responded with the result code other than 1xxx –5xxx.   |
| <b>Protocol Errors (3xxx]</b>    |  |
| Result Code (3002)               | Shows the DIAMETER_UNABLE_TO_DELIVER result code value (3002), if Diameter cannot deliver the message to the destination, either because no host within the realm supporting the required application was available to process the request or because the Destination-Host AVP was specified without the associated Destination-Realm AVP. |
| Result Code (3004)               | Displays the DIAMETER_TOO_BUSY error result code value (3004) only when a specific server is requested and it cannot provide the requested service.  |
| Result Code (3005)               | Shows the DIAMETER_LOOP_DETECTED result code value (3005), when an agent detected a loop while trying to get the message to the intended recipient. The message may be sent to an alternate peer, if one is available, but the peer reporting the error has identified a configuration problem.  |
| Result Code (3008)               | Shows DIAMETER_INVALID_HDR_BITS result code value (3008), if a request was received whose bits in the Diameter header were set either to an invalid combination or to a value that is inconsistent with the Command Code definition.   |
| Result Code (3009)               | Shows DIAMETER_INVALID_AVP_BITS result code value (3009), if a request was received that included an AVP whose flag bits are set to an unrecognized value or that is inconsistent with the AVP definition.   |
| Result Code Others               | Total number of other messages processed and responded.  |
| <b>Transient Failures (4xxx)</b> |  |
| Result Code 4001                 | Shows the DIAMETER_AUTHENTICATION_REJECTED result code value (4001), when the authentication process for the user fails, due to an invalid password used by the user. Further attempts must only be allowed after prompting the user for a new password.   |

| Field                                 | Description  |
|---------------------------------------|--|
| Result Code 4002                      | Shows the DIAMETER_OUT_OF_SPACE Result code value (4002), when a Diameter node receives the accounting request but was unable to commit it to stable storage due to a temporary lack of space.   |
| Result Code Others                    | Total number of other messages processed and responded.  |
| <b>Permanent Failures (5xxx]</b>      |  |
| Result Code 5002                      | Displays the DIAMETER_UNKNOWN_SESSION_ID result code value (5002), if the request contains an unknown Session-Id.  |
| Result Code 5003                      | Displays the DIAMETER_AUTHORIZATION_REJECTED (5003) result code value, if a request was received for which the user could not be authorized. This error occurs if the requested service is not permitted to the user.  |
| Result Code 5005                      | Displays the DIAMETER_MISSING_AVP (5005) result code value, if a request did not contain an AVP that is required by the Command Code definition.<br><br><b>Important</b> If this value is sent in the Result-Code AVP, a Failed-AVP should be included in the message. The Failed-AVP must contain an example of the missing AVP complete with the Vendor-Id if applicable. The value field of the missing AVP should be of correct minimum length and contain zeroes. |
| Result Code 5006                      | Displays the DIAMETER_RESOURCES_EXCEEDED (5006) result code value, when a request was received that cannot be authorized because the user has already expended allowed resources. For example, error occurs when a user is restricted to one dial-up PPP port, attempts to establish a second PPP connection.  |
| Result Code 5012                      | Displays DIAMETER_UNABLE_TO_COMPLY (5012) result code value, if an error is returned when a request is rejected for unspecified reasons.   |
| Result Code 5030                      | Displays the total number of DIAMETER_USER_UNKNOWN (5030) result code value.   |
| <b>Experimental Result Code Stats</b> |  |
| Exp Result Code 5199                  | Total number of times the Experimental-Result-Code "DIAMETER_NEWER_SESSION_DETECTED (5199)" is received in the authentication response message. This result code is introduced to detect stale message requests and support session uniqueness.  |
| Exp Result Code 5001                  | Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_UNKNOWN (5001) is received in the authentication response message.  |
| Exp Result Code 5004                  | Total number of times the Experimental-Result-Code DIAMETER_ERROR_ROAMING_NOT_ALLOWED (5004) is received in the authentication response message.   |

| Field                                  | Description  |
|--|--|
| Exp Result Code 5041                   | Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_NO_WLAN_SUBSCRIPTION (5041) is received in the authentication response message.   |
| <b>S6b Stats</b>                       |  |
| Total Assume-positive                  | Total number of active subscribers which are in S6b by-passed state (assume positive). That is, the total count of active number of PDN sessions for which S6b by-passed.<br><br>This statistics is available per aaamgr-instance level. |
| <b>FH Behavior</b>                     |  |
| Continue                               |  |
| With Retry                             | Total number of times the failure handling action "continue" is applied through the failure-handling-template.   |
| Without Retry                          | Total number of times the failure handling action "continue-without-retry" is applied through the failure-handling-template. This failure action implies that the call will be continued without retrying to the secondary PCRF server.  |
| Retry and Terminate                    |  |
| Retry and Terminate                    | Total number of times the failure handling action "retry and terminate" is applied through the failure-handling-template.  |
| Retry Term without STR                 | Total number of times the failure handling action "retry and terminate" is applied without sending the Session Terminate Request (STR) on call termination.  |
| Termination                            |  |
| Terminate                              | Total number of times the failure handling action "terminate" is applied through the failure-handling-template.  |
| Terminate without STR                  | Total number of times the failure handling action "terminate" is applied through the failure-handling-template without the Session Terminate Request (STR).  |
| <b>Diameter Overload Control Stats</b> |  |
| AAA                                    | Total number of times the Diameter Experimental Result-Code "DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY" (5198) is received in AAA message.  |
| DEA                                    | Total number of times the Diameter Experimental Result-Code "DIAMETER_OVERLOAD_RETRY_NOT_ALLOWED_TO_ANY" (5198) is received in DEA message.  |
| <b>Accounting Servers Summary</b>      |  |
| Message Stats                          | Accounting message statistics.   |



| Field                    | Description  |
|--------------------------|--|
| Total AC Requests        | Total number of AC-Requests.   |
| Total AC Answers         | Total number of AC-Answers.  |
| ACR-Start                | Total number of AC-Request starts.   |
| ACA-Start                | Total number of AC-Answer starts.  |
| ACR-Start Retries        | Total number of AC-Request start retries.  |
| ACA-Start Timeouts       | Total number of AC-Answer timeouts.<br><b>Important</b> This statistics is not supported in 17.0 and later releases.         |
| ACA-Start Req-Timeouts   | Total number of times the AC-Answer Start Request timeout happens due to no response from CCF/peer.                          |
| ACA-Start Res-Timeouts   | Total number of times the AC-Answer Start Response timeout happens due to no response from CCF/peer.                         |
| ACA-Interim Req-Timeouts | Total number of times the AC-Answer Interim Request timeout happens due to no response from CCF/peer.                        |
| ACA-Interim Res-Timeouts | Total number of times the AC-Answer Interim Response timeout happens due to no response from CCF/peer.                       |
| ACA-Stop Req-Timeouts    | Total number of times the AC-Answer Stop Request timeout happens due to no response from CCF/peer.                           |
| ACA-Stop Res-Timeouts    | Total number of times the AC-Answer Stop Response timeout happens due to no response from CCF/peer.                          |
| ACR-Interim              | Total number of AC-Request interim.  |
| ACA-Interim              | Total number of AC-Answer interim.   |
| ACR-Interim Retries      | Total number of AC-Request interim retries.  |
| ACA-Interim Timeouts     | Total number of AC-Answer interim timeouts.<br><b>Important</b> This statistics is not supported in 17.0 and later releases. |
| ACR-Event                | Total number of AC-Request events.   |
| ACA-Event                | Total number of AC-Answer events.  |
| ACR-Stop                 | Total number of AC-Request stops.  |
| ACA-Stop                 | Total number of AC-Answer stops.   |
| ACR-Stop Retries         | Total number of AC-Request stop retries.   |

| Field                                  | Description   |
|--|---|
| ACA-Stop Timeouts                      | Total number of AC-Answer stop timeouts.<br><b>Important</b> This statistics is not supported in 17.0 and later releases. |
| ACA-Dropped                            | Total number of AC-Answers dropped.   |
| <b>ACR-Stop Event Stats</b>            | Accounting message Event statistics.  |
| Service-Sp-Unit-Limit                  | Total number of ACR-STOP messages that are sent with the change-condition "SERVICE-SPECIFIC-UNIT-LIMIT".                  |
| <b>AC Message Error Stats</b>          | Accounting message error statistics.  |
| Diameter Protocol Errs                 | Total number of Diameter protocol errors.   |
| Bad Answers                            | Total number of bad answers.  |
| Unknown Session Reqs                   | Total number of unknown session requests.   |
| Unknown Command Code                   | Total number of unknown command codes.  |
| Request Timeouts                       | Total number of request timeouts.   |
| Response Timeouts                      | Total number of response timeouts.  |
| Parse Errors                           | Total number of parse errors.   |
| Request Retries                        | Total number of request retries.  |
| <b>ACR Message Interim Event Stats</b> |   |
| Volume-limit                           | The total number of ACR-Interims that were triggered because of the event trigger "Volume-Limit"                          |
| Time-Limit                             | The total number of ACR-Interims that were triggered because of the event trigger "Time-Limit"                            |
| RAT-Change                             | The total number of ACR-Interims that were triggered because of the event trigger "RAT-Change"                            |
| TimeZone-Change                        | The total number of ACR-Interims that were triggered because of the event trigger "Timezone-Change"                       |
| PLMN-Change                            | The total number of ACR-Interims that were triggered because of the event trigger "PLMN-Change"                           |
| Max-Charging-Condition                 | The total number of ACR-Interims that were triggered because of the event trigger "Max-Charging-Condition"                |
| Service-Data-Time-Limit                | The total number of ACR-Interims that were triggered because of the event trigger "Service-Data-Time-Limit"               |
| Service-Data-Vol-Limit                 | The total number of ACR-Interims that were triggered because of the event trigger "Service-Data-Volume-Limit"             |

| Field                            | Description  |
|----------------------------------|--|
| AII-Timer                        | The total number of ACR-Interims that were triggered because of the event trigger "AII-Timer"  |
| <b>Result Code Stats</b>         |  |
| Result Code 1xxx                 | Total number of Diameter accounting messages processed and responded with the result code 1xxx.  |
| Result Code 2xxx                 | Total number of accounting messages processed and responded with the result code 2xxx.   |
| Result Code 3xxx                 | Total number of accounting messages processed and responded with the result code 3xxx.   |
| Result Code 4xxx                 | Total number of accounting messages processed and responded with the result code 4xxx.   |
| Result Code 5xxx                 | Total number of accounting messages processed and responded with the result code 5xxx.   |
| Other Result Code                | Total number of accounting messages processed and responded with the result code other than 1xxx –5xxx.  |
| <b>Backpressure Stats</b>        | Diameter Backpressure statistics   |
| <b>Protocol Errors (3xxx]</b>    |  |
| Result Code (3002)               | Shows the DIAMETER_UNABLE_TO_DELIVER result code value (3002), if Diameter cannot deliver the message to the destination, either because no host within the realm supporting the required application was available to process the request or because the Destination-Host AVP was specified without the associated Destination-Realm AVP. |
| Result Code (3004)               | Displays the DIAMETER_TOO_BUSY error result code value (3004) only when a specific server is requested and it cannot provide the requested service.  |
| Result Code (3005)               | Shows the DIAMETER_LOOP_DETECTED result code value (3005), when an agent detected a loop while trying to get the message to the intended recipient. The message may be sent to an alternate peer, if one is available, but the peer reporting the error has identified a configuration problem.  |
| Result Code (3008)               | Shows DIAMETER_INVALID_HDR_BITS result code value (3008), if a request was received whose bits in the Diameter header were set either to an invalid combination or to a value that is inconsistent with the Command Code definition.   |
| Result Code (3009)               | Shows DIAMETER_INVALID_AVP_BITS result code value (3009), if a request was received that included an AVP whose flag bits are set to an unrecognized value or that is inconsistent with the AVP definition.   |
| Result Code Others               | Total number of other messages processed and responded.  |
| <b>Transient Failures (4xxx)</b> |  |

| Field                                 | Description  |
|---------------------------------------|--|
| Result Code 4001                      | Shows the DIAMETER_AUTHENTICATION_REJECTED result code value (4001), when the authentication process for the user fails, due to an invalid password used by the user. Further attempts must only be allowed after prompting the user for a new password.   |
| Result Code 4002                      | Shows the DIAMETER_OUT_OF_SPACE Result code value (4002), when a Diameter node receives the accounting request but was unable to commit it to stable storage due to a temporary lack of space.   |
| Result Code Others                    | Total number of other messages processed and responded.  |
| <b>Permanent Failures (5xxx]</b>      |  |
| Result Code 5002                      | Displays the DIAMETER_UNKNOWN_SESSION_ID result code value (5002), if the request contains an unknown Session-Id.  |
| Result Code 5003                      | Displays the DIAMETER_AUTHORIZATION_REJECTED (5003) result code value, if a request was received for which the user could not be authorized. This error occurs if the requested service is not permitted to the user.  |
| Result Code 5005                      | Displays the DIAMETER_MISSING_AVP (5005) result code value, if a request did not contain an AVP that is required by the Command Code definition.<br><br><b>Important</b> If this value is sent in the Result-Code AVP, a Failed-AVP should be included in the message. The Failed-AVP must contain an example of the missing AVP complete with the Vendor-Id if applicable. The value field of the missing AVP should be of correct minimum length and contain zeroes. |
| Result Code 5006                      | Displays the DIAMETER_RESOURCES_EXCEEDED (5006) result code value, when a request was received that cannot be authorized because the user has already expended allowed resources. For example, error occurs when a user is restricted to one dial-up PPP port, attempts to establish a second PPP connection.  |
| Result Code 5012                      | Displays DIAMETER_UNABLE_TO_COMPLY (5012) result code value, if an error is returned when a request is rejected for unspecified reasons.   |
| Result Code 5030                      | Displays the total number of DIAMETER_USER_UNKNOWN (5030) result code value.   |
| <b>Experimental Result Code Stats</b> |  |
| Exp Result Code 5001                  | Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_UNKNOWN (5001) is received in the authentication response message.  |
| Exp Result Code 5004                  | Total number of times the Experimental-Result-Code DIAMETER_ERROR_ROAMING_NOT_ALLOWED (5004) is received in the authentication response message.   |

| Field                                     | Description   |
|---|---|
| Exp Result Code 5041                      | Total number of times the Experimental-Result-Code DIAMETER_ERROR_USER_NO_WLAN_SUBSCRIPTION (5041) is received in the authentication response message.                                |
| Peer BP Queue Length                      | Displays the peer backpressure queue length.  |
| Peer BP Queue Insertions                  | Displays the peer backpressure insertions to the queue.   |
| Peer BP Queue deletions                   | Displays the peer backpressure deletions from the queue.  |
| Global BP Queue Length                    | Displays the global backpressure queue length.  |
| Global BP Queue Insertions                | Displays the global backpressure insertions to the queue.   |
| Global BP Queue Deletions                 | Displays the global backpressure deletions from the queue.  |
| <b>Duplicate Accounting Records Stats</b> |   |
| ACR-Start Dropped                         | Displays the total number of duplicate Rf START records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list.   |
| ACR-Interim Dropped                       | Displays the total number of duplicate Rf INTERIM records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list. |
| ACR-Stop Dropped                          | Displays the total number of duplicate Rf STOP records which were dropped because of the failure in sending the Accounting records instead of adding them to HDD or archival list.    |

## show diameter aaa-statistics misc-data

*Table 2: show diameter aaa-statistics misc-data Command Output Descriptions*

| Field                    | Description  |
|--------------------------|--|
| Facility                 | The AAA manager facility name.   |
| Instance                 | The AAA manager instance number which has the highest backpressure statistics. |
| Max Peer BP Queue Length | The maximum peer backpressure queue length.                                    |
| Max BP Time              | The timestamp at which the maximum peer backpressure happened.                 |

## show diameter authentication servers

Table 3: show diameter authentication servers Command Output Descriptions

| Field                        | Description  |
|------------------------------|--|
| Context Name                 | Name of the context in which the Diameter servers are configured.  |
| AAA Group                    | Name of the AAA group.   |
| Endpoint                     | Name of the Diameter endpoint.   |
| Peer                         | Name of the Diameter server host.  |
| No of Instance in UP state   | The number of instances between Diameter server and AAA Manager in up state.   |
| No of Instance in DOWN state | The number of instances between Diameter server and AAA Manager in down state.   |
| Priority                     | The relative priority of this server considered when the system is selecting which Diameter server to use. Lower number has higher priority. |
| Message Sent/Queued          | The number of messages sent/queued from Diameter server to AAA Manager.  |

## show diameter diactrl proxy-vm-map

Table 4: show diameter diactrl proxy-vm-map Command Output Descriptions

| Field   | Description  |
|---|--|
| If the MAX mode is configured and if the Diameter proxy to VM mapping is available, the following new fields are displayed:   |  |
| diamproxy instance  | Indicates the Diameter proxy instance.                                       |
| Started on VM   | Indicates the VM on which the Diameter proxy instance exists.                |
| VM served   | Indicates the number of VMs served for a particular Diameter proxy instance. |
| If the MAX mode is configured and if Diameter proxy to VM mapping is not available, the following message is displayed:<br><code>Error: no valid diameter proxy to VM mapping present in diactrl</code> |  |
| If MAX mode is not configured, the following message is displayed:<br><code>Info: proxy-vm-map CLI is valid only for max mode configuration of diamproxy</code>   |  |

## show diameter dynamic-dictionary all

Table 5: show diameter dynamic-dictionary all Command Output Descriptions

| Field   | Description   |
|---|---|
| Dynamic Dictionary Name                         | Indicates the name of the configured Diameter dynamic dictionary.   |
| vids  | Indicates the vendor ID.  |
| Base static dictionary                          | <p>Displays the static dictionary number and name from which the dynamic dictionary is derived.</p> <p><b>Important</b> This field will be displayed only if the "!base-dict &lt;dictionary-number&gt;" is configured in the dynamic dictionary's ABNF text file.</p> <p>If "!base-dict &lt;dictionary-number&gt;" is configured in the ABNF text file, the output will be of the form "&lt;dictionary-number&gt; / &lt;dictionary-name&gt;". By default, "Base static dictionary: 0 / dictzero" will be displayed.</p> |
| Command Code (CC) followed by AVP list          | Displays the list of AVPs and command codes defined in the dynamic dictionary.  |
| Number of Command Codes defined                 | Indicates the number of command codes defined.  |
| Number of AVPs defined                          | Indicates the number of AVPs defined.   |
| Total Number of dynamic-dictionaries configured | Indicates the total number of dynamic dictionaries configured.  |

## show diameter endpoints all

Table 6: show diameter endpoints all Command Output Descriptions

| Field                                       | Description  |
|---|--|
| Context                                     | Name of the configured context.                        |
| Endpoint                                    | Name of the endpoint.                                  |
| Realm                                       | Domain (Realm) name for subscriber.                    |
| Task  | Task running on ACSMgr or AAAMgr.                      |
| CPU   | Indicates the Card and CPU number.                     |
| Application                                 | Indicates the application running on ACSMgr or AAAMgr. |
| Total endpoints matching specified criteria | Indicates the total number of matching endpoints.      |

# show diameter message-queue counters outbound endpoint

Table 7: show diameter message-queue counters outbound endpoint Command Output Descriptions

| Field                            | Description  |
|----------------------------------|--|
| Context                          | Name of the configured context.  |
| Endpoint                         | Name of the endpoint.  |
| Peer Host                        | Name of the peer host.   |
| Peer Realm                       | Name of the peer realm.  |
| Accounting-Answer                | The number of outbound Accounting-Answer messages for the specified endpoint.                |
| Accounting-Request               | The number of outbound Accounting-Request messages for the specified endpoint.               |
| Abort-Session-Answer             | The number of outbound Abort-Session-Answer messages for the specified endpoint.             |
| Abort-Session-Request            | The number of outbound Abort-Session-Request messages for the specified endpoint.            |
| Authorization-Authentication-Ans | The number of outbound Authorization-Authentication-Ans messages for the specified endpoint. |
| Authorization-Authentication-Req | The number of outbound Authorization-Authentication-Req messages for the specified endpoint. |
| Capabilities-Exchange-Answer     | The number of outbound Capabilities-Exchange-Answer messages for the specified endpoint.     |
| Capabilities-Exchange-Request    | The number of outbound Capabilities-Exchange-Request messages for the specified endpoint.    |
| Credit-Control-Answer            | The number of outbound Credit-Control-Answer messages for the specified endpoint.            |
| Credit-Control-Request           | The number of outbound Credit-Control-Request messages for the specified endpoint.           |
| Device-Watchdog-Answer           | The number of outbound Device-Watchdog-Answer messages for the specified endpoint.           |
| Device-Watchdog-Request          | The number of outbound Device-Watchdog-Request messages for the specified endpoint.          |
| Diameter-EAP-Answer              | The number of outbound Diameter-EAP-Answer messages for the specified endpoint.              |
| Diameter-EAP-Request             | The number of outbound Diameter-EAP-Request messages for the specified endpoint.             |



| Field                            | Description  |
|----------------------------------|--|
| Disconnect-Peer-Answer           | The number of outbound Disconnect-Peer-Answer messages for the specified endpoint.           |
| Disconnect-Peer-Request          | The number of outbound Disconnect-Peer-Request messages for the specified endpoint.          |
| Location-Info-Answer             | The number of outbound Location-Info-Answer messages for the specified endpoint.             |
| Location-Info-Request            | The number of outbound Location-Info-Request messages for the specified endpoint.            |
| Multimedia-Auth-Answer           | The number of outbound Multimedia-Auth-Answer messages for the specified endpoint.           |
| Multimedia-Auth-Request          | The number of outbound Multimedia-Auth-Request messages for the specified endpoint.          |
| Profile-Update-Answer            | The number of outbound Profile-Update-Answer messages for the specified endpoint.            |
| Profile-Update-Request           | The number of outbound Profile-Update-Request messages for the specified endpoint.           |
| Push-Profile-Answer              | The number of outbound Push-Profile-Answer messages for the specified endpoint.              |
| Push-Profile-Request             | The number of outbound Push-Profile-Request messages for the specified endpoint.             |
| Re-Auth-Answer                   | The number of outbound Re-Auth-Answer messages for the specified endpoint.                   |
| Re-Auth-Request                  | The number of outbound Re-Auth-Request messages for the specified endpoint.                  |
| Registration-Termination-Answer  | The number of outbound Registration-Termination-Answer messages for the specified endpoint.  |
| Registration-Termination-Request | The number of outbound Registration-Termination-Request messages for the specified endpoint. |
| Server-Assignment-Answer         | The number of outbound Server-Assignment-Answer messages for the specified endpoint.         |
| Server-Assignment-Request        | The number of outbound Server-Assignment-Request messages for the specified endpoint.        |
| Session-Termination-Answer       | The number of outbound Session-Termination-Answer messages for the specified endpoint.       |
| Session-Termination-Request      | The number of outbound Session-Termination-Request messages for the specified endpoint.      |
| User-Authorization-Answer        | The number of outbound User-Authorization-Answer messages for the specified endpoint.        |

| Field                                   | Description  |
|---|--|
| User-Authorization-Request              | The number of outbound User-Authorization-Request messages for the specified endpoint. |
| User-Data-Answer                        | The number of outbound User-Data-Answer messages for the specified endpoint.           |
| User-Data-Request                       | The number of outbound User-Data-Request messages for the specified endpoint.          |
| Total peers matching specified criteria | Indicates the total number of matching peers.  |

## show diameter osid-info sessmgr

*Table 8: show diameter osid-info sessmgr Command Output Descriptions*

| Field         | Description  |
|---------------|--|
| SessMgr Inst  | Session Manager instance number.                           |
| Peer Hostname | Name of the peer host.                                     |
| Peer Realm    | Peer domain (realm) name for Subscriber.                   |
| OSID          | Peer origin state identifier.                              |
| Timestamp     | Timestamp at which the maximum peer backpressure occurred. |
| Calls Cleared | Number of calls cleared.                                   |

## show diameter osid-info sessmgr all

*Table 9: show diameter osid-info sessmgr all Command Output Descriptions*

| Field         | Description  |
|---------------|--|
| SessMgr Inst  | Session Manager instance number.                           |
| Peer Hostname | Name of the peer host.                                     |
| Peer Realm    | Peer domain (realm) name for Subscriber.                   |
| OSID          | Peer origin state identifier.                              |
| Timestamp     | Timestamp at which the maximum peer backpressure occurred. |
| Calls Cleared | Number of calls cleared.                                   |

# show diameter peers full all

Table 10: show diameter peers full all Command Output Descriptions

| Field                            | Description  |
|----------------------------------|--|
| Context                          | Name of the context.   |
| Endpoint                         | Name of the endpoint.  |
| <b>Inbound listening sockets</b> | Displays listening Diameter interface:ports information when origin-host is configured as of "accept-inbound" connection type. If no inbound sockets are present these fields are not displayed. |
| Local Host                       | Name of the local host.  |
| Local Address                    | IP address and port number of the local host.  |
| Endpoint                         | Name of the endpoint.  |
| Task                             | The task instance running on ACSMgr or AAAMgr.   |
| Peer Hostname                    | Name of the peer host.   |
| Local Hostname                   | Name of the local host.  |
| Peer Realm                       | Peer domain (realm) name for Subscriber.   |
| Local Realm                      | Local domain (realm) name for Subscriber.  |
| Peer Address                     | Address of peer domain (realm).  |
| Local Address                    | Address of local domain (realm).   |
| State                            | Indicates the connection status.   |
| CPU                              | The Card and CPU number.   |
| Messages Out/Queued              | The number of messages sent out/queued.<br><b>Important</b> Release 12.0 onwards, this statistic will not indicate the count of outstanding messages for Diameter proxy peers.                   |
| Task                             | The task running on ACSMgr or AAAMgr.  |
| Supported Vendor IDs             | The supported vendor IDs.  |
| Admin Status                     | Indicates the admin status. Whether the user can administratively disable a peer while still preserving its configuration.   |
| DPR Disconnect                   | Indicates the Disconnect-Peer-Request disconnect cause.  |
| Peer Backoff Timer State         | Indicates whether or not the peer-backoff-timer is running.  |

| Field                                   | Description  |
|---|--|
| Peer Origin-State-Id                    | Peer origin state identifier of the peer (if enabled). |
| Total peers matching specified criteria | The total number of peers matching the criteria.       |

## show diameter statistics

Table 11: show diameter statistics Command Output Descriptions

| Field                                | Description   |
|--------------------------------------|---|
| <b>Connection statistics</b>         |   |
| Connection attempts                  | The total number of connections attempted.  |
| Connection failures                  | The total number of connections failed.   |
| Connection reads                     | The total number of connections read.   |
| Connection starts                    | The total number of connections started.  |
| Connection disconnects               | The total number of connections disconnected  |
| Connection closes                    | The total number of connections closes.   |
| Connection DHOST requests            | The total number of connections with DHOST requested.   |
| Connection DHOST removes             | The total number of connections with DHOST removed.   |
| Connection Timeouts                  | The total number of connections timed out.  |
| Tc Expire Connection Attempts        | The total number of connections attempted due to <b>Tc</b> timer expired.<br>Note: The <b>Tc</b> timer controls the frequency that transport connection attempts are done to a peer with whom no active transport connection exists.                            |
| Tw Expire Connection Closes          | The total number of connections closed due to <b>Tw</b> timer expired.  |
| Tx Expire                            | On the expiry of application level timer (Tx/Pending timeout), the application like Gy and Gx will decide what failure handling has to be taken for the message sent to the server. This stats will be incremented if this application level Tx timer expires.  |
| Application initiated Retries        | If the application determines a failure on one connection on which the request message was sent to, it will retry the message to an alternate server if available. This stats will be used if the application decides to retry the message to alternate server. |
| <b>Connection failure statistics</b> |   |
| Connection bind errors               | The total number of connections failed during binding errors.   |

| Field   | Description  |
|---|--|
| Connection connect errors                                   | The total number of connections failed during connect errors.  |
| Connection address errors                                   | The total number of connections failed due to address errors.  |
| Connection misc errors                                      | The total number of connections failed due to other errors not mentioned in output.  |
| Connection DHOST errors                                     | The total number of connections failed due to DHOST errors.  |
| <b>Capabilities Exchange Request and Answers statistics</b> |  |
| Connection CER sent   | The total number of Capabilities Exchange Request (CER) messages sent for connection.  |
| Connection CER send errors                                  | The total number of connections failed due to errors during CER messages sent.   |
| CERs received   | The total number of CER messages received.   |
| Connection CER create failures                              | The total number of connections failed during CER message creation.  |
| CEAs received   | The total number of Capabilities Exchange Answer (CEA) messages received.  |
| CEA AVPs unknown  | The total number of unknown Attribute Value Pairs (AVPs) related to CEA message.   |
| CEA Application ID mismatch                                 | The total number of CEA Application ID mismatch.   |
| Read CEA Messages   | The total number of READ messages for CEA.   |
| Read CEA Messages Unexpected                                | The total number of unexpected READ messages for CEA.  |
| Read CEA Missing  | The total number of missing READ messages for CEA.   |
| Read CEA Negotiation Failure                                | The total number of failures in READ messages negotiation for CEA.   |
| Read CER Messages   | The total number of READ messages for CER.   |
| Read CER Messages Unexpected                                | The total number of unexpected READ messages for CER.  |
| Read CER Missing  | The total number of missing READ messages for CER.   |
| Tw Expire Waiting for CEA                                   | The total number of CEAs waiting for answer due to <b>Tw</b> timer expired.<br><b>NOTE:</b> The <b>Tw</b> timer controls the changing of a peer to the SUSPECT state when no answer is received to a watchdog request. |
| <b>Device Watchdog Requests and Answers statistics</b>      |  |
| DWA attempts  | The total number of attempts for Device Watchdog Answer (DWA).   |
| DWA handle allocation failures                              | The total number of failures to handle allocation of DWA.  |
| DWAs sent   | The total number of DWA messages sent.   |

| Field   | Description  |
|---|--|
| DWR send errors                                       | The total number of errors while sending DWR messages.   |
| Read DWA Messages                                     | The total number of READ messages for DWA.   |
| Read DWA Messages Unexpected                          | The total number of unexpected READ messages for DWA.  |
| Read DWR Messages                                     | The total number of missing READ messages for DWR.   |
| Tw Expire Send DWR                                    | The total number of DWRs sent due to <b>Tw</b> timer expired.  |
| Send DWR Attempts                                     | The total number of attempts to send 'DWR Sent' messages.  |
| Send DWR Send Errors                                  | The total number of errors while sending 'DWR Sent' messages.  |
| Send DWR Calls  | The total number of calls for 'DWR Sent' messages.   |
| Send DWR MH Errors                                    | The total number of message handling errors for 'DWR Sent' messages.   |
| <b>Disconnect Peer Request and Answers statistics</b> |  |
| DPRs Sent   | If the diameter base protocol decides to close a connection, it will send a Disconnect-Peer-Request (DPR) to the server to notify the reason for disconnection. This statistics will be incremented when diameter base protocol sends a DPR to the system.   |
| DPA's Received  | This statistics will be incremented for the reception of Answer message the server responded for the Disconnect-Peer-Request that was sent earlier.  |
| DPR attempts  | This statistics will be incremented when the diameter base protocol decides to send a Disconnect-Peer-Answer to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will be the same as "DPA's Sent" statistics if there is no failure in sending the DPA out.                               |
| DPA's Sent  | This statistics will be incremented if a Disconnect-Peer-Answer is sent to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will happen in case of server initiated connection closure. This will be the same as "DPR attempts" statistics if there is no failure in sending the DPA out. |
| DPR send errors                                       | When a DPR is sent out for connection closure and if the sending of DPR is failed due to some connection issue, this statistics will be incremented.   |
| DPA Message handle allocation                         | When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, this statistics will be incremented.   |
| DPR error immclose                                    | When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, the connection will be closed immediately. This statistics is incremented for those immediate closures without sending a DPA.  |
| Read DPR Messages                                     | This statistics will be incremented when the DPR request received from the server is successfully parsed.  |

| Field  | Description   |
|--|---|
| DPA No Host Error                                      | This statistics will be incremented if a DPR message is received without including Origin-Host AVP. |
| <b>Session Discovery Request and Answer Statistics</b> |   |
| Read SDRs  | The total number of SDR read success  |
| Read SDR Errors  | The total number of SDR read failures   |
| Write SDAs   | The total number of SDR write success   |
| Write SDA Errors                                       | The total number of SDR write errors  |
| Session Not Found                                      | The total number of requests received to recover the session but the session is not found.          |
| <b>Create Messages statistics</b>                      |   |
| Calls  | The total number of calls for 'Create' message.   |
| Success  | The total number of messages successful for 'Create' message.                                       |
| Routed   | The total number of messages routed for 'Create' message.   |
| Directed   | The total number of messages directed for 'Create' message.   |
| Buffer Errors  | The total number of errors for 'Create' message buffer.   |
| Peer Never Up Errors                                   | The total number of errors due to peer failure for 'Create' message.                                |
| Window Errors  | The total number of errors due to 'Create' message window.  |
| Unsupported Application Errors                         | The total number of errors due to unsupported applications for 'Create' message.                    |
| <b>Message Parse statistics</b>                        |   |
| Message Pool Expand Attempts                           | The total number of attempts for message pool expansion.  |
| Buffer Expand Attempts                                 | The total number of attempts for buffer expansion.  |
| Calls  | The total number of calls for message parsing.  |
| Too Many AVP Errors                                    | The total number of message parsed having excessive AVP errors.                                     |
| Header Errors  | The total number of message parsed having header errors.  |
| AVP Unknown Errors                                     | The total number of message parsed having unknown AVP errors (errors not listed here).              |
| Runt Errors  | The total number of message parsed having runtime errors.   |
| AVP Header Errors                                      | The total number of message parsed having AVP header errors.  |
| Message Protocol Error                                 | The total number of message parsed having protocol errors.  |

| Field                          | Description  |
|--------------------------------|--|
| Mand AVP Unknown Errors        | The total number of message parsed having unknown errors for mandatory AVP.      |
| Message aborts                 | The total number of message aborted during parsing.                              |
| <b>Send Message statistics</b> |  |
| Calls                          | The total number of calls for 'Send' message.                                    |
| Truncated Errors               | The total number of truncated errors for 'Send' message.                         |
| <b>Read Statistics</b>         |  |
| Read Bytes                     | The total number of bytes read.  |
| Read Messages Total            | The total number of 'Read' messages.   |
| Requests Read                  | The total number of requests for 'Read' messages.                                |
| Requests Timed Out             | The total number of requests timed out for 'Read' messages.                      |
| Answers Read                   | The total number of answers read for 'Read' messages.                            |
| Answers Timed Out              | The total number of answers timed out for 'Read' messages.                       |
| Read Application Messages      | The total number of 'Read application' messages.                                 |
| Unexpected Answers Read        | The total number of unexpected answers for 'Read' messages.                      |
| <b>Read Parse statistics</b>   |  |
| Begin                          | The total number of parsing begins for 'Read' message.                           |
| E2E Errors                     | The total number of End-to-End (E2E) errors during parsing of 'Read' message.    |
| Success                        | The total number of successful parsing of 'Read' message.                        |
| Application ID Errors          | The total number of errors with Application Id during parsing of 'Read' message. |
| Command/Flag Errors            | The total number of command or flag errors during parsing of 'Read' message.     |
| Diameter Protocol Errors       | The total number of Diameter protocol errors during parsing of 'Read' message.   |
| Errors                         | The total number of errors during parsing of 'Read' message.                     |
| Length Padding Errors          | The total number of 'Length Padding' errors during parsing of 'Read' message.    |
| H2H Errors                     | The total number of Host-to-Host (H2H) errors during parsing of 'Read' message.  |
| Length Too Long                | The total number of message parsed having excessive length of 'Read' message.    |
| Command Unknown                | The total number of message parsed having unknown command in 'Read' message.     |



| Field                        | Description  |
|------------------------------|--|
| Length Sanity Errors         | The total number of message parsed having invalid length of 'Read' message.                            |
| Length-v-SCTP EOR Errors     | The total number of "Length-v-SCTP EOR" errors during parsing of "Read" message.                       |
| SCTP Missing EOR Errors      | The total number of "SCTP Missing EOR" errors during parsing of "Read" message.                        |
| <b>Write statistics</b>      |  |
| total                        | The total number of calls for 'Write' message.   |
| while OPEN                   | The total number of calls for 'Write' message while connection is OPEN.                                |
| while IDLE                   | The total number of calls for 'Write' message while connection is IDLE.                                |
| in other states              | The total number of calls for 'Write' message while connection state is other than OPEN or IDLE state. |
| backpressure events          | The total number of Write messages over the maximum number of outstanding messages to queue.           |
| Written bytes                | The total number of bytes written.   |
| iterations                   | The total number of write iterations.  |
| Written messages             | The total number of messages written.  |
| EOFs                         | The total number of 'Write' messages with End-of-File (EOFs).  |
| errors                       | The total number of 'Write' message with errors.   |
| <b>Peer Calls statistics</b> |  |
| Open Calls                   | The total number of calls to open a peer.  |
| Close Calls                  | The total number of calls to close a peer.   |
| Open New Peer                | The total number of calls to open a new peer.  |
| Open Unknown Peer Errors     | The total number of calls to open an unknown peer.   |
| Open Misses                  | The total number of missed attempts to open a peer.  |
| <b>Route statistics</b>      |  |
| Adds                         | The total number of routes added.  |
| Expires                      | The total number of routes expired.  |
| Hits                         | The total number of hits to a route.   |
| Misses                       | The total number of routes missed.   |
| Indirects                    | The total number of indirect route.  |

| Field                           | Description   |
|---------------------------------|---|
| Installs                        | The total number of redirected routes installed.  |
| <b>Dynamic Route statistics</b> |   |
| Adds                            | The total number of dynamic routes added.   |
| Add Failures                    | The total number of failures in adding dynamic routes.  |
| Removes                         | The total number of dynamic routes removed.   |
| Hits                            | The total number of hits to a dynamic route.  |
| Expires                         | The total number of dynamic routes expired.   |
| <b>Latency statistics</b>       |   |
| Last Round Trip Time (ms)       | The last round trip time, in milliseconds.  |
| Average Round Trip Time (ms)    | The average round trip time in milliseconds.  |
| Renegotiate Peer Messages       | The number of times the diabase interacts with Diameter proxy to renegotiate peer connections when the Diameter dictionary changes. |
| <b>Redirect Host Usage:</b>     |   |
| Redirected Host                 | The number of times the host is redirected.   |
| Redirect Not Cached             | The number of times the redirected host is not cached.  |
| Redirect All Session            | The number of times all messages within the session are sent to Redirect-Host.  |
| Redirect All Realm              | The number of times all messages destined to Realm are sent to Redirect-Host.   |
| Redirect Realm and Application  | The number of times the messages for application requested to Realm are sent to Redirect-Host.                                      |
| Redirect All Application        | The number of times all messages for application are sent to Redirect-Host.   |
| Redirect All Host               | The number of times the messages sent to Redirect-Host AVP value instead of Redirect-Host value sent by the host.                   |
| Redirect All User               | The number of times the message for user sent to Redirect-Host value.   |
| <b>Peer Backoff Timer</b>       |   |
| Start-count                     | The total number of times the peer-backoff-timer is started.  |
| Stop-count                      | The total number of times the peer-backoff-timer is expired.  |
| <b>Diameter DNS Statistics</b>  |   |
| DNS Init                        | The total number of times an application (diabase/proxy) initialized an instance of a DNS library.                                  |

| Field               | Description  |
|---------------------|--|
| DNS De-Init         | The total number of times an application (diabase/proxy) closed an instance of a DNS library.                |
| VPN Init Request    | The total number of init request messages sent to VPN managers from a library.                               |
| VPN Init Response   | The total number of init response messages received from the VPN managers to a library.                      |
| VPN Init Success    | The total number of init success messages received from the VPN managers to a library.                       |
| VPN Init Timeout    | The total number of failed init responses received from the VPN managers to a library due to a timeout.      |
| DNS A Requests      | The total number of A-type (IPv4) requests sent to the VPN from the library.                                 |
| DNS A Responses     | The total number of A-type (IPv4) responses received by the library from the VPN.                            |
| DNS A Hits          | The total number of A-type (IPv4) responses received by the library from the VPN with valid addresses.       |
| DNS A Timeouts      | The total number of A-type (IPv4) response failures due to timeout.  |
| DNS AAAA Requests   | The total number of AAAA-type (IPv6) requests sent to the VPN from the library.                              |
| DNS AAAA Responses  | The total number of AAAA-type (IPv6) responses received by the library from the VPN.                         |
| DNS AAAA Hits       | The total number of AAAA-type (IPv6) responses received by the library from the VPN with valid addresses.    |
| DNS AAAA Timeouts   | The total number of AAAA-type (IPv6) response failures due to timeout.                                       |
| DNS NAPTR Requests  | The total number of Naming Authority Pointer requests sent to the VPN from the library.                      |
| DNS NAPTR Responses | The total number of Naming Authority Pointer responses received by the library from the VPN.                 |
| DNS NAPTR Hits      | The total number of Naming Authority Pointer responses received by the library from the VPN with valid URIs. |
| DNS NAPTR Timeouts  | The total number of Naming Authority Pointer response failures due to timeout.                               |
| DNS SRV Requests    | The total number of Service Locator requests sent to the VPN from the library.                               |
| DNS SRV Responses   | The total number of Service Locator responses received by the library from the VPN.                          |
| DNS SRV Hits        | The total number of Service Locator responses received by the library from the VPN with valid locations.     |

| Field                  | Description   |
|------------------------|---|
| DNS SRV Timeouts       | The total number of Service Locator response failures due to timeout.   |
| A Type App Request     | The total number of A-type requests made by the application to the library.<br>Single application request can result in multiple library to VPN manager requests and vice versa.                    |
| AAAA Type App Request  | The total number of AAAA-type requests made by the application to the library.<br>Single application request can result in multiple library to VPN manager requests and vice versa.                 |
| NAPTR Type App Request | The total number of Naming Authority Pointer requests made by the application to the library.<br>Single application request can result in multiple "library to VPN manager requests and vice versa. |

## show diameter tps-statistics verbose

Table 12: show diameter tps-statistics verbose Command Output Descriptions

| Field                                | Description   |
|--------------------------------------|---|
| Application/ID                       | The name and the identifier of all configured Diameter applications for which the TPS KPI statistics are collected. The Diameter applications, for example, could be Gx, Gy, Rf, etc. |
| Average TPS                          | This is the sum average of all TPS values computed.   |
| Maximum TPS                          | Indicates the maximum TPS value for the specified configuration.  |
| Last 1 Sec Average TPS               | Average value of TPS computed for the last 1 second.  |
| Last 10 Secs Average TPS             | Average value of TPS computed for the last 10 seconds.  |
| Last 30 Secs Average TPS             | Average value of TPS computed for the last 30 seconds.  |
| Last 60 Secs Average TPS             | Average value of TPS computed for the last 60 seconds.  |
| Last 5 Mins Average TPS              | Average value of TPS computed for the last 5 minutes.   |
| Last 10 Mins Average TPS             | Average value of TPS computed for the last 10 minutes.  |
| Last 15 Mins Average TPS             | Average value of TPS computed for the last 15 minutes.  |
| Total number of TPS Statistics found | Shows the total number of TPS statistics collected.   |



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**Important**

The output of **show diameter tps-statistics diamproxy** *diamproxy\_num*, **show diameter tps-statistics application** *application\_name* **summary**, **show diameter tps-statistics application** *application\_name* **endpoint** *endpoint\_name* **summary**, **show diameter tps-statistics application** *application\_name* **endpoint** *endpoint\_name* **verbose** commands are almost similar to the **show diameter tps-statistics verbose** command output. The output fields might vary depending on the configuration.

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